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Spring 2021

## PHIL 334-462: Engineering Ethics

Gareth Edel

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## PHIL 334- ENGINEERING ETHICS

SPRING 2021

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### **PHIL 334 - ENGINEERING ETHICS Section 004 Synchronous Online- MW 12:30 PM - 01:50 PM**

Synchronous Online: delivery of instruction takes place during the day and time noted, independent of location. All course activity can be completed online through the learning management system. There are no face-to-face sessions, but remote attendance is expected.

**Zoom Invitation EDEL Sp2021 ENGINEERING ETHICS Phil334 MW 12:30 PM - 01:50 PM**

**Join Zoom Meeting -- <https://us02web.zoom.us/j/83142752877?pwd=Rkd4Z1hVUFc4a1ZQbTE0Y01ybzFDUT09>**

Meeting ID: 831 4275 2877 Passcode: Ethics

Alternative- One tap mobile +19292056099,,83142752877#,,,,\*926561# US (New York) +1 929 205 6099 US (New York)

Meeting ID: 831 4275 2877 Passcode: 926561

### **PHIL 334 - ENGINEERING ETHICS - Section 460 & 462 -- Asynchronous ONLINE**

Online: Delivery of instruction in which all course activity can be completed online through the learning management system. There are no required face-to-face sessions but students are expected to follow a week-by-week schedule as outlined in the syllabus. Work is typically done in an asynchronous mode and students can complete the coursework without coming to campus. Note: some instructors may require occasional synchronous online meetings or proctored exams.3 (sometimes referred to as eLearning).

#### **COURSE DESCRIPTION:**

As individuals and members of society, we are called on to make decisions. The study of ethics is traditionally the mechanism to reach better decisions. This course presents a philosophical examination of the nature of engineering practice and applied technology as ethically loaded. This loading, that each decision has ethical ramifications, means that one must make engineering and technical decisions to the best of one's ability. The course considers such questions as: How do the societal functions of engineers and the practical application of technologies relate to basic moral and intellectual values? What moral obligations are implied by the uses and creation of technology? What are the ethical duties of engineers in the practice of their careers?

Learning outcomes expected: 1) Develop fluency with basic language of ethical evaluation and perspectives, including the STS perspective that technology is not neutral and that technical decisions are inherently ethical and important. 2) Learn to see that useful concepts such as basic alternative design theories allow the expansion of available choices beyond most obvious. 3) Increase ability to recognize, evaluate, and articulate ethical aspects of technical choices and to frame how technical choices should be better made. 4) Improve ethical decision-making skills through practice at intentional decisions and through familiarizing oneself with available ethical theories and established case studies. 5) Generally develop reading and communication skills in the Humanities and Social Sciences through course work.

**PROFESSOR OFFICE HOURS & CONSULTATION TIMES:** Office hours, individualized face to face contact is the best way to receive support or to have your questions answered in depth. Students can speak to me outside of class, and outside of pre-scheduled office hours by making an appointment. Office hours will be conducted digitally via Zoom, these hours are not for appointments, they are "drop-in" and any student may visit the meeting and ask questions, invitations will be noted on the course Canvas, you may copy and paste the link below.

Dr. Edel will be available on the reoccurring zoom meeting from 2-3 PM each day Monday to Thursday, and can stay late if students need more time. Additional time by appointment is available from 3pm until 5:30pm Mon-Thursday; or early appointments on Wednesdays or Thursdays, from 10am – 1pm. Students are encouraged to come and talk about any issues, seek explanations, check in on current class standing, encouragement & support.

**DR EDEL'S "Drop in" OFFICE HOURS -SPRING 2021- Monday- Thursday 2:00 PM- 3:00 PM**

**OFFICE HOUR ZOOM: <https://us02web.zoom.us/j/84203842098?pwd=Z05JbmVlaHdjampvazAvYTVFSXM2QT09>**

Meeting ID: 842 0384 2098 Passcode: OfficeHour

[Alternative- One tap mobile +19292056099,,84203842098#,,,,\*7753235611# US (New York) +1 929 205 6099 US (New York)

Meeting ID: 842 0384 2098 Passcode: 7753235611

Office hours are the best way to get help with material, feedback on works, clarification of material, details of expected grades, or discuss related questions about the class.... Please consider coming to office hours rather than emailing so that you may receive answers that are more detailed more quickly. Appointments outside or Drop-in hours are available based on my availability Monday to Thursday, with advanced planning.

In this daily hour, you may simply join the zoom to ask questions or speak to the professor. One on one conversation is the best way to directly clarify material and answer your questions, please come join me.

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## Online Learning Management System- CANVAS

Even more than “usual” current circumstances demand that we make use of the Canvas LMS, all students are required to check it regularly and to submit work on that platform. Folders or input boxes for weekly submissions of assignments will be present, and it is students responsibility to post their work on time. All Submitted work you post to Canvas, should be **submitted in PDF format** or typed/pasted into the entry box provided. Any files submitted need to have a file name/title filled in in the following format “Student Name(full name or first initial last name)-Course Name (Tech & Human Values) or Number (STS310)- Assignment Title” (for example- “response to Foucault”). So for example I would submit the first reading response writing as “G. Edel- STS 310- First Reading Response” or “Gareth Edel – STS 310- Winner Reading Response.”

Quizzes and exams will be on the canvas, and instructions will be posted there.

**All readings are provided by the professor in pdf/digital format on the CANVAS page for the class.** While no textbooks are required purchases, students may find printing and reading the documents on paper enables note taking and improves retention. Students who have difficulty with downloading the pdfs from canvas must seek assistance from a peer student, from the professor, or google and search for the document online, you are responsible for getting the readings.

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## ACADEMIC INTEGRITY

You should already be aware that the relationships between students and professors--as well as those between students and their classmates are built on trust. You, as students, trust that teachers have made appropriate decisions about the structure and content of the courses, and teachers must trust that the students do their own work and make efforts to complete assigned materials. “Acts, which violate this trust, undermine the educational process.” (Stanislewsky 2013). Suspected cheating or plagiarism will result in the incidents reporting to the Dean of Student Affairs and a temporary or permanent failing grade for this course. For example, quotation of information or inclusion of quotations of text, must be recognizably connected to a citation to the original source, even unintentional errors are plagiarism. All direct or paraphrased quotations, citations of data or content from any source must be cited. Even close paraphrases require direct citation of the original source. All forms of academic dishonesty are violations of the trust we share with one another and the respect we should give our professors, colleagues, and ourselves. Students should be actively working to develop clear and proper citation and attribution habits as parts of all coursework, it is a basic professional and ethical skill in our information centered world today. **Students who are unfamiliar with citation and attribution practices may seek help from the professor in office hours or from the writing center and should do so as early as possible in the process. No specific citation style is required, simply that you attempt to use any one style properly (APA, MLA, Chicago, etc.... any are acceptable).** Note: Plagiarism by error should be extremely unlikely because none of the essay assignments will be research papers requiring a plethora of outside sources. You are capable of keeping track of material for the main paper that requires a total of 7 sources over three stages outside of assigned course readings and students are expected to be able to keep track of material and information from the course readings and these outside sources.

## LEARNING OUTCOMES

- **Increased fluency in ethical thinking**, theories and tools for conceptual application in the engineering profession,
- **Practice skills in recognizing Ethical problems, “Issue Finding”**, and increased critical preparedness to see the ethical dimensions in technical and professional activities. Learn a framework suggesting ethical thinking is needed in all stages, from development and design, in implementation, and production to the consumer use of technical products and systems
- Students will perform regular writing, and be responsible for in class discussion, improving both written and verbal communication skills with complex materials. Particularly, students will gain experience synthesizing and responding to research and class materials to articulate and ‘use’ academic forms of communication and thought. Specific attention will be paid to developing skills in research writing, working from outline, draft and revision of research subject, research questions and argument in response to research materials found.
- Learn to Recognize the extensive ethical obligations of professional engineering, and to see the acts of engineering and design as subject to social, ethical and political evaluation. Learn and practice applying an ethical theory and ethical decision-making
- Gain Familiarity with a variety of case-examples of ethical issues in diverse technical domains, gaining experience in looking at examples s analogues providing suggestions in new and familiar engineering contexts.

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## EXPECTATIONS/GRADING

### Primary Expectation for Successful completion of class:

This course has a lot of reading and writing involved, students will complete a research paper over the course of the semester totaling nearly 20 pages, and will complete extensive weekly readings. There will be weekly digital Quizzes, as well as a midterm, and final exam will be used to evaluate student learning and promote ongoing attention to the class. For Spring 2021 all quizzes and exams will be given on the Canvas LMS

Each Week Students will attend the digital lecture either via the prerecorded format (if asynchronous) or at the scheduled class time if Synchronous). During class lectures students will be given a framework to interpret and understand the readings in relation to the course as a whole, and students should have completed that weeks readings in full prior to the lecture. Each week a written response to the lecture and readings will be submitted on the Canvas LMS. The lectures for the Asynchronous class will be posted/published on the Canvas by 8pm Monday and should be watched early enough in the week to be considered in completing

your quiz and weekly writing. Both the Synchronous and Asynchronous classes are expected to have completed the weekly work prior to the Saturday of each week so as to begin the readings, and then writing for the next week. This includes all writing assignments submitted before midnight on Friday night. Extra credit work may be turned in late, but non-extra credit work turned in late is accepted at Professor's discretion, and if I accept late required work it generally will be at a -1 Pt value.

Grades will be returned on the CANVAS LMS as quickly as I'm able to catch up, when you need grades sooner - I provide feedback and comments on submitted work in office hours

For the Synchronous class be prepared to respond to and discuss the Lecture for the week which will refer to content from the readings at the second class of the week (which is dedicated to discussion of the course concepts and cases, and students participation, even simply asking questions, is required).

**Regarding The Canvas Gradebook & Online Grading-** In the past I have not used the online gradebook in Canvas, and I caution all students that it will be less reliable in my use than in some professors. I suggest speaking to me in office hours about feedback on work and course standing in office hours, I will be attempting to fill in grades on canvas but expect technical difficulties. But- I believe that students are better served by thinking about the syllabus and course materials to evaluate their learning and efforts rather than simply relying on the listed grades. The grading format for this, and many courses is designed with an transparent rubric because it allows you better intentional and reflexive self-evaluation. The skill of determining expectations and planning your activities in responding to those expectations is a fundamental personal management skill you should be working to develop during college.

**A note on reading and time:** When planning your time, each course professor is entitled to expect more hours of reading and independent "homework" outside of class than the course's credit hours for in-class activity and lecture. You should arrange your schedule to allow you to do multiple hours of unscheduled and scheduled independent work for this class. All readings are provided from the beginning of the course, and while guided reading will be more productive, if you are aware that readings will be slow or that time available for you may differ week to week, begin reading early, stay ahead and take notes. The goal of reading isn't to make your eyes pass over text, it is to absorb and interact with the concepts within the writing, you need to have enough time to think with the reading.

#### **Course Grading Rubric & Work Components-**

Students should be able to approximate their course standing by self-evaluation, you may count up your expected points out of a possible 100%, this allows you to look at the grading scale for the course below and add up points to predict current grade achieved. The work you do is a completion checklist working towards the full set for which you'd gain an A, you may therefore plan and consider when to do work, and when not to, in order to achieve the grade you want to work towards. Students are strongly encouraged to talk to the professor about the details of grading, and for clarification, in office hours.

#### **Asynchronous: (Section 460 & 462 )**

Completed all READINGS and documented progress in Weekly Response Writing	20 %
Weekly Reading Quizzes	15%
Midterm Examination	15%
Final Examination	20%
Semester Research Project	30%
Extra Credit (?)	
<b>Total Possible: 100</b>	

#### **Synchronous (Section 004)**

Attended all classes and regularly Participated in discussions asking and answering questions	10 %
Completed all READINGS and documented progress in Weekly Response Writing	20 %
Weekly Reading Quizzes	15%
Midterm Examination	15%
Final Examination	20%
Semester Research Project	20%
Extra Credit (?)	
<b>Total Possible: 100</b>	

#### **Grading scale this course uses is as follows: A= 100%-89% B= 88%-80% C=78% -70% D=68%-55% F=51% - 0%**

Note: pluses and minuses will be given for assignments, Final grades do not contain Minuses and will be rounded to nearest letter grade or Plus per NJIT's policies. My habit is a tendency to grade harshly, to round down rather than up, on assignments, and to round up if close to letter grades on the final grade due to the lack of the "minus" modifier option.

## **GRADE COMPONENT DESCRIPTIONS:**

**READING & Weekly Response Writing** – The core mechanism of the class is reading and lectures, the lectures assume you have attempted to work through the readings prior to them. **All readings are to be completed before the the lecture**

Each week students will complete and submit Short (500-700 word) weekly writings, these must be submitted on the course CANVAS prior to the start of class on Monday to document their reading and thinking. They are graded based on two simple rubric- “Did you demonstrate reading? And - Did you demonstrate comprehension and/or engagement with the material?” Students who submit summary or reading notes will receive half credit for the reading, but need to provide commentary & response interpretation to receive the second half of the credit. **You are required to submit 12 weekly responses, one for each SET of readings** not one for each article or reading. Late work will be accepted before the end of the semester, but consistent late work will effect the semester grade. AN IDEAL response would include the following elements: (1) a summary or description of the key idea(s) to demonstrate your reading, not a detailed outline of the reading, just what the core ideas were, (2) a specific connection to course themes or contents of one or more prior weeks readings, (3) a clear division between your interpretation and thoughts and the components that are direct summary or description of the work in question, AND (4) questions about the reading offered as potential for course discussion. **PLEASE NOTE: All readings listed are required except where marked specifically as recommended** and will be referenced and required for exams.

**Participation (10%) (SYNCHRONOUS ONLY)** --Active and informed discourse, communication and participation in class discussions counts for a relatively important portion of your final grade in this course. If you are afraid of speaking in public, push yourself to try. If you are terribly afraid of speaking in public, please talk with me about it privately to discuss *possible* extra credit to balance for lost points. Student participation may take the form of discussion to the whole class in the ZOOM Chat, rather than verbal commentary with the microphone. Students should attempt aim for substantive comment in most weeks, you may respond to other students, or ask questions, but the underlying assumption is that participation demonstrates your having read and thought about course materials. **Note:** Ask questions in class, there really are no bad questions (no matter how simple or poorly-formed the question seems to you) it still contributes and counts as “active and informed participation.” When in doubt, ask about things on your mind, about the reading, about a word you didn’t understand, or about an idea you had, it will add to class. your asking may offer stimulus to help other students answer and discuss.

**SEMESTER PROJECT- Ethical Evaluation/Decision Profile:** To Practice forming arguments that are grounded in specific ethical theories & recognizing decisions as moments when ethics are either followed or breeched you will outline a case based on a decision. You will distinguish between your own ethics as researcher/evaluator and the different ethics of the research subjects being evaluated. **Stage 1-** Define a Broad Subject Case (An event, a technology?) What Happened? How is it different or linked to other broad cases? Begin gathering resources that describe the case. **Stage 2-** Which specific decision and why? Outline events, details of actors, statements and other materials that establish the specific and general actions in the case. Who did what? When, where, why, and how? Who didn’t know? What laws/regulations, systems are involved? What backgrounds and professions were the participating actors, who were the affected people or implicated actors, the decision makers and people affected form a coherent and recognizable group of stakeholders in the event. **Stage 3-** clarifying the individuals and the structural or context reasons for decisions, how was/were the decision(s) you are focusing on made, what ethics were involved, what systems were related to this, what limits or demands? Were they making the decision well? Lay out the decisions and evaluate them using ethical and social theory from the class. The final version will ask and answer: “Why did this particular action/decision happen” You must use course vocabulary and concepts in the written document. While an ideal paper will usually be around 20 pages, there is a 12 Page minimum, and no maximum. Minimum/Recommended length does not include title page or the required bibliography/ work-cited. Profile/Papers must be submitted On Canvas typed, double spaced, in 11-12pt Font that is conventional and readable;

A longer Description will be provided in a handout later.

**Quizzes, Midterm Examination & Final Examination-** A combination of multiple choice, and open ended (essay style) questions will be used to evaluate and direct learning. Students should be prepared to answer questions regarding the full content of the course prior to each exam at that time, they are cumulative. So the midterm covers all readings prior to the exam, and the final examination covers all the materials from the whole class, both readings and lectures.

**Extra Credit (??%)** - Varieties of opportunities exist for students to perform extra credit writing. Primarily students are encouraged to write extra short notes and responses beyond those required. **Students must have permission prior to completion of extra credit, approval is needed for submission.** For example detailing an additional media source related to course materials, bringing in a current academic article and a summary, etc. Points from additional writing will apply to replace missing points for quizzes or supplement points from other assignments before being applied generally. Additional options will be announced, or you may ask the professor. There is no specific limit to extra credit points, and students are encouraged to discuss options with me to supplement exam and replace participation points.

## COURSE POLICIES

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**Attendance Policy-** Ideally you won't Miss any classes. Please. **Consistently attending class, missing only 1-2 classes throughout the semester, and making up work you missed is the basic limit before it negatively effects your grade.** Officially, students fail a class after missing 6 class sessions, I am 100% not rigid in applying this, if Students can document Important. explanations for absences and if they rapidly make up for missed class materials in writing via notes, and discussion with student peers. Explanations need to be non-reschedulable, and non-prioritization, for example you may not gain an excused absence if they "needed to focus on an exam for another class" despite the complex pressures students are under, you may not be excused due to prioritizing other predictable obligations. **Attendance --** Per the University Policy, egregious absences (officially 5th without official excuse via Dean of Students office) is grounds to fail a class. Some flexibility based on circumstances, presence for Lecture and discussion is included in exams.

**Class sessions Format & Lateness Policy-** Class sessions will be a mix of lecture, discussion, and in-class group and individual writing activities, on a daily basis in class students will get new material in the class meetings. Attendance and arriving on time are fundamental to successful participation in a seminar class. **Reoccurring tardiness/lateness more than 5 Min after class is scheduled to start will effect participation grades.** Students should be on time for class, the school provides a transitional 10 min between time slots, and if students schedules make arriving on-time "difficult" they have a responsibility to manage their time, and to make arrangements with another student to assist in covering any material missed in class.

**Readings:** There will be between 40+ pages of reading each week. Students should have completed the readings *prior* to the first meeting of the week and must be prepared to discuss them. **Completion of readings prior to class meeting is fundamental to understanding lecture material, and being able to participate in discussion.** All selections and readings will be made available on the course Canvas as PDF documents.

**Behavior-** As Professionals in training, and as adults, all students are expected to exhibit respectful conduct in the classroom. Students should participate in discussion, with an effort to produce an open conversation for other students, and to focus comments on course materials. Students may choose to be more formal or less formal to the professor, I will be forgiving about interactions with me, but Students must show utmost curtesy for their peers in the classroom, do not interrupt or interrogate others even if you disagree about interpretations, instead transform your concern or disagreement into an open question for the group, and direct it to the professor. Courtesy, civility, and respect at all times are necessary for open learning in a discussion based classroom. Students who act inappropriately will be warned, and further infractions will effect your participation grade or the student will be asked to leave the room.

**Academic Honesty and Plagiarism:** In the words of Prof. Stanislawsky: "Student-teacher relationships are built on trust. Students must trust that teachers have made appropriate decisions about the structure and content of a course, and teachers must trust that the assignments students turn in are their own." Additionally students are trusted to do readings, and to work to the fullness of their ability, in turn the teacher assumes the effort to explain and work with students to develop their understanding and skills. I take seriously my responsibility in this trust and require students to do so also. Along with Institute Policy, I do not tolerate any form of plagiarism: the copying of work not written by you (including cutting and pasting of e-texts). Any use of outside material must be cited in full. Any student caught plagiarizing will **fail this course and be reported to the Dean of Students.** Note that the requirement for citation of material applies equally to paraphrasing and sourcing ideas as well as to readings assigned in the class and outside readings.

**Gender Fair & respectful Language:** Students in this course are expected to use gender fair and respectful language in their writing, and in the classroom. While we all make mistakes and need to take time to learn respectful and appropriate habits of dialogue, students must make an effort, and in particular must be careful when writing when revision and review of the material allows one to be held to a higher standard. Please remember, every time you use a masculine-oriented word to refer to people in general, the implicit effect, even if unintended, is to whisper: *women don't count.* **Please note that if the professor or a student makes you uncomfortable with their language you can speak to the professor or if more comfortable for you ask the Chairperson of the Department of Humanities to speak to the professor for you.** Concern should be towards respectful language in general, not only regarding gender, and students should try to avoid unintentionally ethnocentric, racist or biased language of other types. Intentional use of biased language, and or forms of communication that breach community norms may effect grades, both of classroom participation and of written work. Note- **Students who have Pronoun or Name preferences should inform the professor** and should expect that their identity and preference will be respected and used.

**Students in need of accommodations or with disabilities -** I don't strictly require students to conform to official policy, any student who requests extra time on exams, or a reasonable accommodation of their needs to perform or be comfortable in class, I will attempt to assist or meet your needs. To be accommodated seek to express your needs to the professor as early in the process as possible and be open about any limits or preferences that may need to be considered in your performance in class. Officially and Additionally- **Any student requiring accommodations due to one or more disabilities should also make sure to contact the Office of Accessibility Resources and Services** (Kupfrian Hall 201, Email at DSS@NJIT) both for themselves and to support the maintenance of good policies for other students who need support. Students who are ESL or Learning Disabled should inform the professor and will be allowed to negotiate appropriate modification to course expectations.

## COURSE OUTLINE & SCHEDULE

**EACH WEEK LISTS THE READING TO BE COMPLETED PRIOR TO THE SECOND CLASS OF THE WEEK---** You are strongly encouraged to start readings Thurs/Friday/Weekends/end of each week rather than waiting to read last moment. You MUST read for the discussion in the Wed Class each week where students will be expected to actively talk. Readings Must be completed for the second class meeting of the week & reading response papers must be provided on paper in class at the second meeting of the week!

### WEEK 1 (MLK DAY 1/18, Tuesday 1/19 First Day of Classes)

**Wed 1/21 FIRST DAY OF CLASSES Was MONDAY**

Discussion: Introduction & Discussion of Syllabus; What we study in Ethics: Reflexivity and Intentional Decision Making

### WEEK 2

**Mon 1/25 & Wed 1/27** Last Day to Add/Drop a Class /Last Day for 100% Refund, Full or Partial Withdrawal

**Readings Due:** Mathes & gray "Engineer as Social Radical", and Winner "Do Artifacts have Politics?";

Discussion: How Ethics are built into technology, How technological choices matter as ethical choices.

### WEEK 3

**Mon 2/1 & Wed 2/3 (2/2 Happy Groundhog's Day)**

**Required Reading Due:** "Introduction to Ethical Reasoning" by Donadlson & Werhane, and "Introduction to Engineering Ethics Selection" From Harris.

Discussion: Formal ethics as a way of thinking & Cultivating Ideas of Ethics as Professional Practice.

### WEEK 4

**Mon 2/8 & Wed 2/10 (2/12 Happy Chinese New Year)**

**Required Readings Due:** 'Alternative Design Scholarship: Working toward Appropriate Design' by Nieuwsma

Discussion of readings- Nieuwsma and Practices of design and ethics in engineering applied commitments

### WEEK 5

**Mon 2/15 & Wed 2/17 Last Day for 50% Refund, Full Withdrawal (Happy President's Day, Classes as usual)**

**Required Readings Due:** 3 article Set- 1) Rennix & Robinson, The Trolley Problem, 2)- Millar - "You Should have a say in your robot Car's Code of Ethics", and 3) TBA. Discussion- Building ethics into things depends on our understanding and the tools or models of ethics we are used to change our understanding.

Discussion of Readings- How we think about an issue can narrow our attention, mental models such as the hypothetical of the trolley problem, produce training in how to think about choices/options. These articles push for greater 'complexity' of thinking and consideration of possibilities and options/choices.

**PAPER INSTALLMENT #1 Due 2/17- General Area of Topic PROPOSAL & FIRST ANNOTATION OF A SOURCE**

### WEEK 6

**Mon 2/22 & Wed 2/24 (2/26 Purim)**

**FIRST/MIDTERM EXAM WEEK**

First Class of week- Review of framework and concepts from first part of class, Second Class of the week- **"FIRST EXAM"**

## -----PART II- CASE STUDIES -----

### WEEK 7

**Mon 3/1 & Wed 3/3**

TOPIC Business Technology and "Cost Benefit Analysis" in Decisions and Ethics

**Required Readings Due:** Selected Chapters of The Ford Pinto Case- A study in applied Ethics, Business & Technology' by Birsch & Fielder,

### WEEK 8

**Mon 3/8 & Wed 3/10 Last Day for 25% Refund, Full Withdrawal**

Technologies enable large effects, Computers and business decisions seen as "neutral" participate in ethical wrongs.

**Required Readings Due:** The Second world War Reading Due: Selections from Death by Design By Eric Katz, Intro and 'IBM and the Holocaust' by Edwin Black

### WEEK 9- SPRING BREAK

**\*Sunday March 14- Sunday March 21st Spring Recess - No Classes Scheduled - University Open**

**(Daylight Savings Time Change 3/14)**

**(St. Patrick's Day 3/17)**

## **WEEK 10**

**Mon 3/22 & Wed 3/24**

From Computers and Datafication to the Internet and Transformation of Culture. Case Example - The internet

**Required Readings Due:** Selections on the internet, from 'Code 2.0' by Lawrence Lessig, and a Chapter From Sherry Turkle.

**PAPER INSTALLMENT # 2 Due 3/24- Specific Topic, Initial argument outline, & 7 Annotated Sources**

## **WEEK 11**

**Mon 3/28 & Wed 3/30 (3/28 May it be a peaceful and welcome Passover)(3/29 Happy Holi)  
(April 2 Friday Good Friday - No Classes Scheduled - University Closed) (Easter Sunday 4/4)**

WEEK 10- Monday march 30th – Thursday APRIL 2nd

From The Internet to Algorithms and Automation of Software, making the choices invisible in code.

**Required Readings Due:** Case Example - AI & Algorithms Reading Due: #1 From Emerging Technology From the arXiv, "AI can be made legally accountable for its decisions" MIT Tech #2 Knight, Will, "Is technology about to decimate white collar work?" Business Insider #3 Kraemer,

Overal, & Peterson, "Is there an ethics to algorithms" #4 Sidell, "Can computers be racist?"

## **WEEK 12**

**Mon 4/5 & Wed 4/7 LAST DAY TO WITHDRAW**

Case- Medical technology & Distinctions in Ethics of Urgency & time

**Required Readings Due:** Reading #1 Excerpt from The Danger Within Us by Jeanne Lenzer

<http://www.wbur.org/hereandnow/2018/01/10/medical-devices-danger-within-us-jeanne-lenzer> Reading # 2 Groeger, "How does the FDA monitor your medical implants" Reading # 3 – Fox, "Black children receive less pain meds" Reading #4 – Rosenthal, "Paying till it hurts, a case study in high costs" Reading #5 – "The Lesson of Epipens, why drug prices spike again and again"

## **WEEK 13**

**Mon 4/12 & Wed 4/14 (Hindi New Year, Then Ramayana)**

Liability as Substitute for Ethics in the Law.

**Required Readings Due:** Reading # 1 Moll, "Product liability law: What engineers need to know" Reading # 2- Willats, "Death by reckless design: Need stricter criminal statutes engineering related homicides" Reading #3 – Vardaro & Waggoner, "Statutes of Repose: The design professional's defense to perpetual liability"

## **WEEK 14**

**Mon 4/19 & Wed 4/21**

Required reading Due: Rhiengold- Look Who's talking (Amish and Cell Phones) Wired Magazine

**PAPER INSTALLMENT #3 Due 4/21- Preliminary draft outline & Introduction, Expanded references attached.**

## **WEEK 15 -FINAL WEEK OF CLASS**

**Mon 4/26 & Wed 4/28**

Semester Review Week- No New readings.

## **WEEK 16**

**Mon 5/3 - Final Monday Classes of semester**

Students in the class are strongly encouraged to schedule their time to complete the Final Exam during the final class Day Monday May 3<sup>rd</sup>, the Professor will be available for discussion and possible Remedy of any problems with the exam. Students may elect to take the exam starting when the exam opens at 11 am on Monday May 3<sup>rd</sup>. It will be available until the end of the weekend following, Must be completed before Monday May 10<sup>th</sup> (submitted before 11:59 of Sunday night May 9<sup>th</sup>).

**SEMESTER PROJECT/PAPER FINAL COMPLETED VERSION DUE FRIDAY MAY 7<sup>th</sup> (unless extension pre approved)**

NOTES: May 4 Tuesday Friday Classes Meet Last Day of Classes May 5th- 6th Reading Days

May 7-13th, Fri- Thurs Final Exam Period, Grades Filed by Midnight Saturday 5/15)

**(May 14-16 Eid al Fitr/Ending of Ramadan)**